REMARKS

Applicants have amended claims 1, 2 and 18. The subject matter, amended in claims 1, 2 and 18, is clearly shown in paragraph [0019]-[0020] of the original files. Thus, no new matter is entered by these amendments

Claim Rejection Under 35 U.S.C. 102

Claims 1, 3, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (U.S. 5,548,181). Applicants respectfully traverse this rejection.

In response to this rejection, Applicants have amended claim 1 without any new matter being entered and respectfully traverse the rejection for the following reasons.

Claim 1 recites in part:

> A barrier array for use in a flat panel display, comprising:
>
> a **shadow mask including** a metal plate and a plurality of openings defined therethrough according to a predetermined pattern...; and

an insulative layer including a first portion directly formed on the upper surface of the metal plate, a plurality of second portions, and a third portion directly formed on the lower surface of metal plate, the second portions disposed in the respective openings and connecting the first portion with the third portion.. (Emphasis added.)

Jones et al. discloses that the spacer 115 comprises an insulator 120, coated with a low electron emission coating 121 such as magnesium oxide (MgO). The insulator 120 may be a silica material. The spacer 115 further comprises a buried conductor 122 formed of a suitable material such as molybdenum or aluminum, connected to ground. Simply stated, the spacer 115 includes the insulator 120, the buried conductor 122 and the low electron emission coating 121. The buried conductor 122 is formed below the insulator 120. The low electron emission coating 121 covers the upper surface of the insulator 120, and the lower surface of the buried conductor 122 and the sides thereof (Column 13, Fig. 74). There is **no single insulative layer that has portions thereof that are, respectively, formed directly on the upper and lower surfaces of the buried conductor 122.** Instead, the insultator 120 is on one side thereof, and the low electron emission coating 121 is on the opposite side thereof. Applicants, thus, submit that Jones et al. at least fails to teach, disclose, or suggest that a shadow mask that includes a metal plate and an insulative layer, in the particular manner set forth in amended claim 1.

Further, Applicants submit that the whole metal plate functions as a substrate, which together with the insulative layer functions as an insulative plate to separate an anode plate from the emitter. Meanwhile, the buried conductor 122 connected to ground is utilized to shunt voltage arcs (column

14, lines 20-24). Thus, the insulators 120, together with the low electron emission coating 121, functions like the metal plate together with the insulative layer. Simply stated, the metal plate should not be interpreted as the buried conductor 122.

Furthermore, the shadow mask of the presently claimed device produces new and unexpected results. A shadow mask used in the device of claim 1 can be made by a known technology in the flat panel display field with a high precision, and the claimed barrier array is convenient and inexpensive to make. Additionally, no insulator is disposed between the metal plate and the insulative layer of amended claim 1, thereby decreasing the cost of the fabrication of the presently claimed device.

Therefore, claim 1, as amended, is patentable over Jones et al., taken alone or in combination with any other cited reference, under U.S.C. 102 and 103.

Accordingly, amended claim 1 is in condition for allowance, the allowance of which is hereby respectfully requested.

Claims 2-5 is directly dependent from now-allowable claim 1, and, as such, Applicants submit that claims 2-5 should also be allowable.

Claim 18 recites in part:

> A barrier array for use in a flat panel display, consisting essentially of:
>
> ...a metal plate including a plurality of openings therethrough according to a pixel pattern of a flat panel display, the metal plate having an upper surface and a lower surface

opposite to the upper surface; and

an insulative layer including a first portion directly formed on the upper surface of the metal plate and a plurality of second portions, the second portions extending from the first portion ...(Emphasis added.)

In part, for above reasons asserted with respect to amended claim 1, Jones et al. fails to disclose or suggest a metal plate and an insulative layer, as required by amended claim 18. Further, the spacer 115 of Jones includes the insulator 120, the buried conductor 122 and the low electron emission coating 121. As such, it cannot be defined solely in terms of a metal plate and a given insulative layer, as is the case in claim 18, as amended. Therefore, amended claim 18 is not taught or suggested by Jones et al. or any of the other cited references, taken alone or in combination.

Furthermore, the shadow mask of the present invention, as provided in amended claim 18, produce new and unexpected results, as set forth above with respect to claim 1. Therefore, amended claim 18 is patentable over Jones et al. or any of the other cited references, taken alone or in combination, under U.S.C. 102 and 103.

Accordingly, claim 18, as amended, is in condition for allowance, the allowance of which is hereby respectfully requested.

Claim 20 is directly dependent from now-allowable claim 18, and, as such, Applicants submit that claim 20 should also be allowable.

Claim Rejection Under 35 U.S.C. 103

Claims 4, 5 and 22 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Jones et al. (U.S. 5,548,181).

Claims 4 and 5 are each directly dependent from claim 1. As detailed above, claim 1 is submitted to be patentable over Jones et al. under 103. Therefore, claims 4 and 5 should also be allowable, since each of them includes the patentably distinguishing features of claim 1.

Claim 22 is directly dependent from claim 18. As detailed above, claim 18 is submitted to be patentable over Jones et al. under 103. Therefore, claim 22 should also be allowable, since it includes the patentably distinguishing features of claim 18.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (U.S. 5,548,181) in view of Lee et al. (U.S. 6,508,685B).

Claim 2 is directly dependent from claim 1. As detailed above, claim 1 is submitted to be allowable over the prior art of record. Therefore, claim 2 should also be allowable, since it includes the patentably distinguishing features of claim 1.

In view of the foregoing, the present application as defined in the pending claims is considered to be in a condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,
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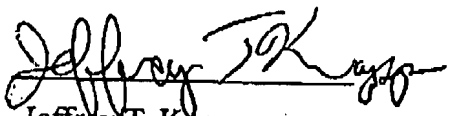
By 

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